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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,552

05/26/2006

Beverley Brown

MERCK-3181

5966

23599 7590 07/10/2007
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EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

07/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,552

Applicant(s)

BROWN ET AL.

Examiner

Chukwuma O. Nwaonicha

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Current Status

1. Claims 1-26 are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d)

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 12, 15, 23 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is rejected because of the phrase "Compound Groups 1 or 8". It should read "Compound Group 1 or 8". Correction is required

Claims 12, 15 and 23 contain the trademark/trade names. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of

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goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe TopasTM 8007 and PTAA1 and, accordingly, the identification/description is indefinite.

Claim 26 is rejected because of the phrase "most preferably 1. Correction is required

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 9-22 are rejected under 35 U.S.C. 102(b) as being anticipated Brown et al., {WO 0245184, same as US 7,095,044}.

Brown et al. disclose applicants' claimed semiconducting layer formulation or composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

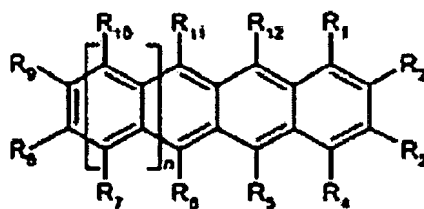
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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minakata, {WO 2003016599, same as US 7,061,010} in view of Brown et al., {WO 0245184, same as US 7,095,044}.

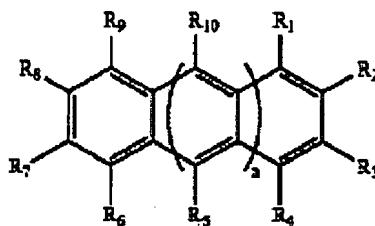
Applicants claim an organic semiconducting layer formulation with an active ingredient of the general formula I; wherein all the variables are as defined in the claims.



formula I

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Minakata discloses applicants' claimed semiconducting layer formulation or composition with active ingredient of formula II; wherein all the variables are as defined in the specification. See the disclosure of the invention, working examples and columns 25-30.



formula II

Ascertainment of the difference between the prior art and the claims (M.P.E.P. §2141.02)

Minakata semiconducting layer formulation or composition differ from the instantly claimed formulation in that the instantly claimed formulation has an organic binder with a permittivity at 1,000 Hz of 3.3 while Minakata is silent about the permittivity of the organic binder employed. Another difference between applicants claimed semiconducting layer formulation and that of Minakata is that applicants claim a semiconducting layer formulation wherein the ratio of polyacene compound to binder is 20:1 to 1:20 by weight while Minakata is silent about the ratio of polyacene compound to binder. Another difference between applicants claimed semiconducting layer formulation and that of Minakata is that applicants claim a semiconducting layer formulation wherein the solid content is 0.1 to 10% while Minakata teach a semiconducting layer formulation wherein the solid content is 0.02 to 5%.

However, Brown et al. cure the deficiencies of Minakata by teaching a field effect transistor includes a semiconductor layer formulation comprising an organic semiconductor and organic binder. The organic binder has inherent conductivity of less than 10^{-6} Scm^{-1} and a permittivity at 1000 Hz of less than 3.3. The organic binder is a homopolymer of styrene. See page 4, line 10-30 and the claims.

Finding of prima facie obviousness--rational and motivation (M.P.E.P. §2142-2143)

The instantly claimed semiconducting layer formulation would have been suggested to one of ordinary skill because one of ordinary skill wishing to obtain semiconducting layer is taught to select the active ingredient from the genus of Minakata and Brown et al.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the compounds that make up the composition including the binder, the ratio of additives in the formulation and the substituents on the genus of Minakata and Brown et al. to arrive at the instantly claimed semiconducting layer formulation. Said person would have been motivated to practice the teaching of the references cited because they demonstrate that semiconducting layer formulation with said active ingredient are useful in electronics and other industrial applications. The instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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Claim 26 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 11 of the co-pending application 11/671,877. This is a double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne (Bonnie) Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

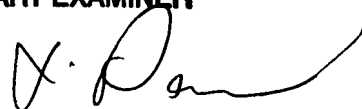
Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
Art Unit: 1621

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J. PARSA
PRIMARY EXAMINER

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For



Yvonne (Bonnie) Eyler
Supervisory Patent Examiner,
Technology Center 1600